

Key Point: *Java syntax is defined in the Java language specification, and the Java library is defined in the Java application program interface (API). The JDK (Java Development Kit) is the software for compiling and running Java programs. An IDE is an integrated development environment for rapidly developing programs.*

- The Java language specification is a technical definition of the Java programming language's syntax and semantics. You can find the complete Java language specification <https://docs.oracle.com/javase/specs/>.
- The application program interface (API), also known as library, contains predefined classes and interfaces for developing Java programs. You can view and download the latest version of the Java API at <https://download.java.net/jdk8/docs/api/>.
- Java comes in three editions
 - *Java Standard Edition (Java SE)* to develop client-side applications. The applications can run on desktops.
 - *Java Enterprise Edition (Java EE)* to develop server-side applications, such as servlets, JavaServer Pages (JSP), and JavaServer Faces (JSF).
 - *Java Micro Edition (Java ME)* to develop applications for mobile devices, such as cell phones.
- Our text uses Java SE.
- We will use the latest version, Java SE 8. A Java Development Kit (JDK) is released with each version of Java. The version of the JDK is called *JDK 1.8*.
- The JDK consists of a set of separate programs, each invoked from a command line, for compiling, running, and testing Java programs.
- The program for running Java programs is known as *JRE (Java Runtime Environment)*.
- Instead of using the JDK you can use a Java development tool (e.g. NetBeans, Eclipse, and TextPad) – software that provides an *integrated development environment (IDE)* for developing Java programs quickly.